

### Abstract

A dual coil half bridge converter adapted to be coupled to a dual coil actuator of a cylinder valve in an internal combustion engine is described. In one example, the converter has a first and second capacitor and a voltage source, where the converter is actuated via switches to individually energizing coils in said dual coil actuator. A voltage regulator is also shown for maintaining midpoint voltage during unequal loading of different actuator coils in the converter.